

2020 TRIP GENERATION WORKSHEET - Page 2 of 3

TABLE 1- Rural Trip Generation				TABLE 2 - City Trip Generation				TOTAL
Traffic Zone	# Houses outside City Limits		# Trips Gen. 1994 (TP _{Prur})	Traffic Zone	Whiteville/Brunswick 1994 Population		# Trips Gen. 1994 (TP _{Pcty})	# DU Trips (TP _{Du})
	1994 (H _c)	2020 (H _e)			% (ZPOP%)	# (ZPOP#)		
I	394	511	4,086	I	0.0	0	0	4,086
II	364	472	3,775	II	1.5	120	468	4,243
III	571	740	5,917	III	3.5	280	1,093	7,009
IV	0	0	0	IV	19.0	1,520	5,932	5,932
V	52	67	539	V	12.0	960	3,746	4,285
VI	0	0	0	VI	17.0	1,360	5,307	5,307
VII	5	6	52	VII	24.0	1,920	7,493	7,544
VIII	0	0	0	VIII	5.0	400	1,561	1,561
IX	13	17	135	IX	11.0	880	3,434	3,569
X	258	334	2,673	X	7.0	560	2,185	4,859
Totals:	1,658	2,147	17,177	Totals:	100.0	8,000	31,220	48,396

H_c = 1994 Houses estimated (See 1994 Trip Generation worksheet.)

H_e = 2020 Houses estimated = $H_c * (1+GR)^{26}$

ZPOP% = estimated % of city population within each zone.

ZPOP# = amount of city population within each zone = $([ZPOP\%/100] * POP)$

TP_{Pcty} = City generated trips = $([ZPOP\#/PDU] * DUTG)$.

TP_{Du} = (TP_{Prur} + TP_{Pcty})

Total # DU Trips (TP_{Du}): 48,396

COMMERCIAL TRIPS

2020 Commercial Trip Generation Factor (CG): 0.14

Commercial (TP_{com}) = # of commercial trips gen. = (TP_{Du} * CG).

The 2020 Comm. Trip Gen. Factor was taken from Tech. Report 11, Table 1, using Ahoskie as the closest match to Whiteville, then adjusted per KDH.

6,775

Total # of Internal Trips by Pop. & Development (TP_{in}): 55,172

TP_{in} = (TP_{Du} + TP_{com}).

Step 2: Internal trips are calculated. We can now calculate the number of internal trips with external destinations. The number of trips that stay in the planning area is in direct proportion to the number of employers inside the planning area compared with population. The Employment/Population Reduction Factor (EPR) is estimated using employment/population ratio and borrowed data from older studies. The EPR is multiplied by the total number of internal trips generated by Population & Development. The result is the number of internal trips which stay inside the planning area (II). The remainder trips have external destinations (IE).